

# Chemical treatment of spider mites

## Restricting the use of chemicals that cause mite population flares

Some chemicals are associated with mite flares. This can be due to several reasons but primarily it is because these chemicals either encourage the mites to lay more eggs (the neonicotinoids, e.g. imidacloprid) or eliminate natural predators (the synthetic pyrethroids, e.g. bifenthrin). Where possible, avoid using these chemicals or if they must be used, time their use to the low-risk periods for mite flares, such as winter.



Figure 1 Spider mite damage on leaves

## Apply miticides correctly

Firstly, it's important to check to ensure that live mites are still present and it's not residual damage that's still visible. With only a limited number of miticides available to the banana industry, it is important for treatment efficacy and long-term availability of these products that they are applied correctly.

- Avoid using neonicotinoids for control of banana weevil borer and banana rust thrips (e.g. imidacloprid), particularly if hot dry conditions are expected. These chemicals can cause mites to lay more eggs.
- Avoid using broad spectrum pyrethroids (e.g. bifenthrin) as these products will remove the predator (beneficial) population.
- Miticides will not provide instant results as it may take 2-3 days before the mites begin to die.
- Apply miticides in the cooler parts of the day as the leaves close up during the middle of the day, making full leaf coverage difficult to achieve. Mites are generally found on the undersides of the leaves therefore it is important that the leaves are open at the time of application.
- Apply miticides with 400 L/ha to 600 L/ha of water to ensure good coverage. Poor coverage will result in limited mite mortality and may create chemical resistance problems.
- Rotate between the available modes of action, chemical groups and abide by the restricted number of annual uses for each product to minimise the chance of chemical resistance issues.
- Knockdown miticides will only control nymphs and adults and therefore may require a follow up application 10–14 days later to control mites that have hatched from the eggs.
- Some miticides are referred to as ovicides meaning they only control the eggs, preventing them from hatching. These must be applied with a knockdown miticide to control the adult population.

**For more information contact:**  
The Better Bananas team at  
[betterbananas@daf.qld.gov.au](mailto:betterbananas@daf.qld.gov.au)

Table 1: Pesticides currently registered for control of Banana Spider Mite / Strawberry Spider Mite (*Tetranychus lambl*) and/or Two Spotted Mite (*Tetranychus urticae*) in banana crops.

Options are correct as of December 2023. Always check products are registered for control in your State prior to use and follow label directions accordingly.

Active Ingredient	Chemical group	Mode of action	Trade name*	Comments
Bifenthrin	3A	Contact	Talstar®80 SC	Knockdown miticide: controls adults and immature stages. Does not affect eggs. Preventative treatment may require follow-up application at 10-14 day intervals. Use is not compatible with an IPM approach.
Sulfur PER9409	UN Compound (unknown)	Contact		Knockdown miticide: requires contact but can control adults and immature stages.  Under permit PER9409, as bunch dusting.
Propargite	12C	Contact	Omite®, Betamite®	Knockdown miticide: controls adults and immature stages. Does not affect eggs. May cause phytotoxicity. Toxic to predatory mites.
Clofentezine	10A	Insect growth regulator/ contact	Apollo®	Selective treatment (Ovicide): controls the eggs and prevents eggs from hatching.  A knockdown miticide is required to provide control of adult mites.
Etoxazole	10B	Mite growth regulator/ contact	Paramite®	Selective treatment (Ovicide): Causes adults to lay sterile eggs and stops existing nymphs and eggs from developing.  A knockdown miticide is required to provide control of adult mites.
Fenbutatin oxide	12B	Contact	Torque®	Knockdown miticide: controls adults and immature stages. Does not affect eggs.
Potassium salts of fatty acids	UNE	Contact	Natrasoap®	Knockdown miticide: requires contact but can control adults and immature stages.  May cause phytotoxicity.

Impact on beneficials: ■ Very low ■ Low ■ Medium ■ High ■ Very high

Impact on beneficial insects taken from the Banana Agrichemical Review Process (SARP) April 2020.

Information sourced from the Cotton Pest Management Guide 2018–19 and cotton use patterns.

\* Trade names are used as an example only, other products may exist, and one name is chosen for simplicity and space.

This factsheet has been produced as part of the National Banana Development and Extension Program which is funded by Hort Innovation, using the banana industry research and development levies and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture. The Queensland Government has also co-funded the project through the Department of Agriculture and Fisheries.

Horticulture Innovation Australia (Hort Innovation) and the Queensland Government make no representations and expressly disclaim all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in this factsheet. Reliance on any information provided by Hort Innovation and the Queensland Government is entirely at your own risk. Hort Innovation and the Queensland Government are not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way (including from Hort Innovation and the Queensland Government or any other person's negligence or otherwise) from your use or non-use of this factsheet or from reliance on information contained in the material or that Hort Innovation and the Queensland Government provides to you by any other means.